110 South Downey Avenue, Indianapolis, Indiana 46219-6406
Telephone 317-630-9060, Facsimile 317-630-9065
www.MundellAssociates.com

May 2, 2012

Mr. Corey Webb
Section Chief
Voluntary Remediation Program
Office of Land Quality
100 North Senate Avenue
Indianapolis, Indiana 46204

Re: **Revised Work Plan for Third Round of CAP 18 ME™ Injections**
Michigan Plaza
3801-3823 West Michigan Street
Indianapolis, Indiana 46222
IDEM Incident # 0000198
IDEM VRP # 6061202
MUNDELL Project No. M01046

Dear Mr. Webb:

This *Revised Work Plan for the Third Round of CAP18 ME™ Injections* is being submitted to the Indiana Department of Environmental Management (IDEM) by MUNDELL & ASSOCIATES, INC. (MUNDELL), on behalf of AMMH, to describe upcoming remediation activities at the Site planned for May 2012. The revisions have been made based on data gathered from the additional wells installed across the study area in 2011. The following sections provide detailed discussions regarding the design of this third and (anticipated) final CAP 18 ME™ injection at the Site. Previous CAP 18 ME™ injections were completed at the Site in August 2007 and February 2009.

The concentration trends of tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride (VC) in ***Source Areas A, B, and C*** at the Site have indicated that dechlorination of the chemicals is still occurring (refer to the *Quarterly Monitoring Progress Report – 4th Quarter 2011* dated January 31, 2012, for specific data summaries and figures). The locations of ***Source Areas A, B, and C*** are included in this Revised Remediation Work Plan (**Figure 1**).

Based on a review of the analytical data, it appears that complete de-chlorination of all of the PCE is not occurring in ***Source Areas A, B, and C***, as observed in the concentration trends observed in monitoring wells MMW-P-02 and MMW-C-01, (***Source Area A***), MMW-8S (***Source Area B***), and MMW-1S, MMW-9S and MMW-10S (***Source Area C***).

Also, a number of recently installed monitoring wells have identified pockets of chlorinated hydrocarbons (MMW-P-11S (PCE = 592 ug/L in 4th Quarter 2011) in ***Source Area A*****;** MMW-P-12S and MMW-P-12D (cis 1,2-DCE = 642 ug/L and 644 ug/L respectively, in 4th Quarter 2011) in ***Source Area B***). As such, it is MUNDELL's opinion that additional enhanced in-situ biodegradation efforts and the injection of additional CAP 18 ME™ product are required in these areas.

CAP 18 ME™ BIOREMEDIATION DESIGN AND IMPLEMENTATION

CAP 18 ME™ Design

The amount and distribution of CAP 18 ME™ needed for each area to be injected (***Injection Areas)*** was designed taking several factors into account as well as the practical experience of the manufacturers of CAP 18 ME™, the Carus Corporation (Carus). The amount of CAP 18 ME™ to inject into the ***Injection Areas*** was calculated using the *CAP 18™ and CAP 18 ME™ Anaerobic Bioremediation Products Design Software* provided by Carus. This software takes into account the treatment area volume (based on plume size) and the soil characteristics (type, bulk density, fraction of organic carbon, total and effective porosity, hydraulic gradient and conductivity). The spreadsheet then calculates the dissolved and sorbed contaminant demand, as well as the background demand from geochemical parameters (i.e., the site levels of dissolved oxygen, nitrate, manganese, iron, sulfate and hardness). These parameters then factor into the stoichiometric demand for hydrogen, and the corresponding amount of CAP 18 ME™ needed for a particular treatment area. Microbial degradation and design contingency factors of safety are considered as well in the calculations. For this site, a factor of safety of 2 was selected to allow for degradation and design uncertainties. Spreadsheet assumptions for the calculation of demand for CAP 18 ME™ for each ***Injection Area*** are shown in **Table 1**. Computations estimated that approximately 1,133 lbs, 6,821 lbs, 2,265 lbs, and 5,525 lbs of CAP 18 ME™ were needed for ***Injection Areas A-1, B-1, B-2*** and ***C-1***, respectively, based on the cumulative indicator compound concentrations and geochemistry parameters obtained (predominantly) during 2011 quarterly sampling events.

Several iterations of CAP 18 ME™ injection distribution were evaluated using the *Bioremediation Products Design Software* and considering Site physical features. The first consideration was to determine what type of application would best fit the remaining plume's size and distribution in each ***Source Area*** given the geology, geochemistry and indicator compounds. The saturated zone within each ***Source Area*** has poorly-graded, medium sand (SP) underlain by well-graded, gravelly sand (SW).

MUNDELL's experience with CAP 18 ME™ in sands at the Michigan Plaza Site confirms that fatty acids that are broken down through beta-oxidation can travel distances as great as 75 ft to 100 ft from the place of injection, thereby allowing "treatment" to continue hydraulically downgradient as the fatty acids migrate and continue to lend hydrogen atoms for reductive dechlorination. Given this geologic advantage and the plumes being situated as they are in relation to Michigan Street and the Plaza strip mall, it was determined that a 'treatment curtain' design distribution would be effective.

The injection spacing for the selected design is largely determined by the aquifer's ability to receive the product. An injection spacing of 10 ft to 15 ft on centers is considered very effective for the sands encountered at the Site. Curtain 'rows' stacked three deep are planned for ***Injection Area C-1****,* four rows are planned for ***Injection Area B-1,*** two rows are planned for ***Injection Area B-2***, while a single-row curtain design will be implemented in ***Injection Area A-1***. Curtain areas are generally oriented perpendicular to either the plume or parallel with building walls or sewer transects that control injection accessibility. Anticipated injection locations are presented on **Figure 1**. This configuration was designed to provide the most thorough coverage per ***Injection Area***. After the number of points was established per ***Injection Area***, the total oil demand for each ***Injection Area*** was divided by the number of points.

Based on previous CAP 18 ME™ injection events at the Site performed in August 2007 and February 2009, several design factors have been implemented. This design accounted for injecting the CAP 18 ME™ conservatively throughout a 12-foot thickness in the upper saturated zone at each injection point in ***Injection Area A-1***, and throughout a 20-foot thickness in the upper saturated zone at each injection point in ***Injection Areas B-1, B-2,*** and ***C-1***. These injection thicknesses allow for introduction of the product throughout the sand and gravel aquifer down into the top of the underlying silty clay glacial till, which acts as a barrier to further vertical groundwater movement. In ***Injection Area B-1,*** an additional set of injection locations positioned adjacent to monitoring wells MMW-P-12S and MMW-P-12D have been included in the design to provide added treatment across an approximate five foot vertical thickness, focused on the smear zone and water table in this area.

As an additional enhancement to the injection plan, halo-respiring bacteria will be added to the CAP 18 ME™. The bacteria will be added to the CAP 18 ME™ material in optimal amounts prior to injection via drilling rods. The addition of the bacteria will serve to more rapidly increase the mass of bacteria acting on the remaining residual chlorinated material.

Introduction of the CAP 18 ME™ into the aquifer at 3-foot depth intervals has proven to be the most effective injection strategy during the previous two injection events. In addition, injection of twice as much product into the upper 10 feet of the saturated zone

as compared to greater depths places the product in the zone most impacted by previous releases from the former Accent cleaners. This will focus the remedial effort on the drycleaner impact as opposed to treatment of deeper impacts associated with an upgradient source.

Health and Safety

MUNDELL will prepare a Health and Safety Plan to ensure that activities for remediation will be conducted with industry standard safety measures, and that the surrounding public would not be threatened by any of the activities the occurred.

MUNDELL will contact Indiana Plant Protection Service (IUPPS) for utility locates in the specific areas being drilled. As a supplement to this utility locate, MUNDELL will also utilize its own geophysics department to provide more in depth locates of utilities and obstructions. Locations will be adjusted based upon the results of these utility investigations as needed.

CAP 18 ME™ Injection Application

CAP 18 ME™ injection remediation activities are anticipated to begin in late May 2012, or when approval from IDEM is received. CAP 18 ME™ will be injected into each injection point using the following protocol:

1) At each injection point in Area A-1, the Geoprobe® will direct push the drill rods approximately 12 feet into the saturated zone. Based on historic gauging data, the terminus depth will be approximately 31-32 ft-bgs.

2) At each injection point of Areas B-1, B-2, and C-1, the Geoprobe® will direct push the drill rods down to the bottom depth, as determined by the depth of the lower clay till layer.

3) The total poundage of CAP 18 ME™ loading designed per boring and a conversion of 7.7 pounds per gallon will be used to estimate the amount of gallons required. From this amount, the estimated amount of 3-foot lifts will be calculated, with the bottom lift being just into the clay till, and the top lift being anywhere from 1 to 3 feet above the observed water table (to account for seasonal fluctuations).

4) Calculated volumes of CAP 18 ME™ will be pumped from the 55-gallon drums into a hopper, bacteria will be added, and this mix will be pumped utilizing a diaphragm pump and compressor through tubing sealed and connected to the Geoprobe® tooling rods down into the bottom of the drill rods, where it is slowly injected under pressure into the formation at the 3-foot lift intervals and loading requirements established above. At completion, each boring will be filled with

granular bentonite and capped with either topsoil if in grassy areas, or asphalt patch in the parking areas.

5) MUNDELL will collect pre-injection and post-injection static water level readings in monitoring wells nearest the injection locations to evaluate the anticipated radius of influence (of 10 feet). The readings will be summarized in a table included in the 2nd Quarter 2012 *Quarterly Monitoring Report* for the Site.

Table 2 is provided which summarizes the planned injection quantities for each injection point, and each ***Injection Area***.

Vapor Intrusion Assessment

MUNDELL is continuing to attempt to gain access to the residence located at 3817 West Michigan Street to complete a vapor intrusion assessment. If and when access is obtained from the property owner and the work plan approval is received from IDEM, MUNDELL will promptly move forward with the following proposed activities.

MUNDELL will conduct a baseline sampling event at the residence located immediately west of the Plaza property (3817 West Michigan Street) to determine if elevated levels of volatile organic compounds (VOCs) exist in the ambient air outside of the residence, or the indoor air of the crawl space or living room. Three samples will be collected from the home including ambient outdoor air (**P-AA-1**), crawl space air (**P-CS-1**) and living room air (**P-IA-1**). These proposed sampling locations are included on **Figure 2**.

The ambient air sample will be collected from the residence exterior within the breathing zone. Each of the indoor air and crawl space air samples will be collected from as close to the center of the room or building footprint, respectively, while avoiding areas where sampling would interfere with daily building use. During sampling activities, MUNDELL will document any odors, cleaning supplies, paint cans or any other conditions that could potentially affect the sampling results. Each ambient and indoor air sample will be collected in a 6-liter, inert, stainless-steel Summa canister over a 24-hour period with the pressure and flow rate in each canister being controlled with a pressure regulator. The samples will be delivered overnight to ALS Laboratory Group in Salt Lake City, Utah, and analyzed for U.S. Environmental Protection Agency Method TO-15 for VOCs.

We appreciate the opportunity to update IDEM on the upcoming remedial activities planned at the Site. If you have any questions, please do not hesitate to contact us at (317) 630-9060 or via email (jmundell@MundellAssociates.com; mbreting@MundellAssociates.com).

Sincerely,

MUNDELL & ASSOCIATES, INC.

Mark E. Breting, L.P.G.
Senior Project Geologist

John A. Mundell, P.E., L.P.G.
President/Senior Environmental Consultant

Attachments: Tables
Figures

cc: Mr. Peter Cappel, AIMCO

TABLES

TABLE 1

CAP 18™ and CAP 18 ME™ Anaerobic Bioremediation Products Design Software

Input Parameters and Estimation Methodology

Michigan Plaza
3801-3823 West Michigan Street
Indianapolis, Indiana
MUNDELL Project No. M01046

INJECTION AREA A-1

Treatment Area Volume		ESTIMATION METHOD
Curtain Length	30 feet	Based upon remaining chlorinated solvent impacts as indicated by Quarterly monitoring activities.
Thickness of Treatment Zone	12 feet	Saturated interval thickness in Injection Area A-1
Well Spacing	10 feet	An injection spacing of 10 - 15 ft on centers is considered very effective for sandy saturated units, as encountered at the Site during previous soil investigations.
Treatment Area Characteristics		
Nominal Soil Type	SAND	Based upon field conditions observed during previous soil investigations.
Total Porosity	0.38	Default Values
Effective Porosity	0.29	
Hydraulic Conductivity	28.5 ft/d	
Hydraulic Gradient	0.003975 ft/ft	Calculated using the average hydraulic gradient from Quarters 1-4, 2010. The hydraulic gradient was calculated for each Quarter, then averaged across the four Quarters.
CAP-18 Lifespan	2 years	Based upon the estimated CAP 18 ME™ lifetimes observed following the 2007 and 2009 injection events.
Dissolved Contaminant Demand		
PCE	0.227 mg/L	Averaged MMW-P-11S and MMW-P-02 groundwater concentrations from Quarters 1-4 ,2011.
TCE	0 mg/L	
DCE	0.0413 mg/L	
VC	0.188 mg/L	
Background Demand		
Oxygen	0.731 mg/L	Averaged low flow sampling parameters as measured during Quarters 1-4, 2011. (Wells included: MMW-P-05, MMW-P-06, MMW-P-04, MMW-P-03S, MMW-P-03D, MMW-P-11S, MMW-P-02 and MMW C-02)
Nitrate	0.67 mg/L	Averaged groundwater concentrations. (Wells included: MMW-P-06, MMW-P-04, MMW-P-03S, MMW-P-03D MMW-P-11S, and MMW-P-02)
Manganese	2.0 mg/L	Default Value
Iron	2.78 mg/L	Averaged groundwater concentrations. (Wells included: MMW-P-05, MMW-P-06, MMW-P-04, MMW-P-03S, MMW-P-03D,MMW-P-11S and MMW-P-02)
Sulfate	61.9 mg/L	Averaged groundwater concentrations from Quarters 1-4, 2011. (Wells included: MMW-P-05, MMW-P-06, MMW-P-04, MMW-P-03S, MMW-P-03D, MMW-P-11S, MMW-P-02 and
Hardness	496 mg/L	Averaged groundwater concentrations from Quarters 1-4 ,2010. (Wells included: MMW-P-03S)

TABLE 1

CAP 18™ and CAP 18 ME™ Anaerobic Bioremediation Products Design Software

Input Parameters and Estimation Methodology

Michigan Plaza
3801-3823 West Michigan Street
Indianapolis, Indiana
MUNDELL Project No. M01046

INJECTION AREA B-1

Treatment Area Volume		ESTIMATION METHOD
Curtain Length	60 feet	Based upon remaining chlorinated solvent impacts as indicated by Quarterly monitoring activities.
Thickness of Treatment Zone	20 feet	Saturated interval thickness in Injection Area B-1 (three injection locations adjacent to MMW-P12S and MMW-P-12D will have a treatment zone limited to approximately five feet across smear zone/water table)
Well Spacing	10 feet	An injection spacing of 10 - 15 ft on centers is considered very effective for sandy saturated units, as encountered at the Site during previous soil investigations.
Treatment Area Characteristics		
Nominal Soil Type	SAND	Based upon field conditions observed during previous soil investigations.
Total Porosity	0.38	Default Values
Effective Porosity	0.29	
Hydraulic Conductivity	28.5 ft/d	
Hydraulic Gradient	0.003975 ft/ft	Calculated using the average hydraulic gradient from Quarters 1-4, 2010. The hydraulic gradient was calculated for each Quarter, then averaged across the four Quarters.
CAP-18 Lifespan	2 years	Based upon the estimated CAP 18 ME™ lifetimes observed following the 2007 and 2009 injection events.
Dissolved Contaminant Demand		
PCE	0.0476 mg/L	Averaged groundwater concentrations as measured during Quarters 1-4 , 2011. (Wells included: MMW-P-01, MMW-P-12S, MMW-P12D)
TCE	0.0457 mg/L	
DCE	0.850 mg/L	
VC	2.324 mg/L	
Background Demand		
Oxygen	0.225 mg/L	Averaged low flow sampling parameters as measured during Quarters 1-4 , 2011. (Wells included: MMW-P-12S, MMW-P12D)
Nitrate	0 mg/L	Averaged low flow sampling parameters as measured during Quarters 1-4 , 2011. (Wells included: MMW-P-12S, MMW-P12D)
Manganese	2.0 mg/L	Default Value
Iron	2.1 mg/L	Averaged low flow sampling parameters as measured during Quarters 1-4 , 2011. (Wells included: MMW-P-12S, MMW-P12D)
Sulfate	140 mg/L	Averaged low flow sampling parameters as measured during Quarters 1-4 , 2011. (Wells included: MMW-P-08)
Hardness	688 mg/L	

TABLE 1

CAP 18™ and CAP 18 ME™ Anaerobic Bioremediation Products Design Software

Input Parameters and Estimation Methodology

Michigan Plaza
3801-3823 West Michigan Street
Indianapolis, Indiana
MUNDELL Project No. M01046

INJECTION AREA B-2

Treatment Area Volume		ESTIMATION METHOD
Curtain Length	22 feet	Based upon remaining chlorinated solvent impacts as indicated by Quarterly monitoring activities.
Thickness of Treatment Zone	20 feet	Saturated interval thickness in Injection Area B-2
Well Spacing	10 feet	An injection spacing of 10 - 15 ft on centers is considered very effective for sandy saturated units, as encountered at the Site during previous soil investigations.
Treatment Area Characteristics		
Nominal Soil Type	SAND	Based upon field conditions observed during previous soil investigations.
Total Porosity	0.38	Default Values
Effective Porosity	0.29	
Hydraulic Conductivity	28.5 ft/d	
Hydraulic Gradient	0.003975 ft/ft	Calculated using the average hydraulic gradient from Quarters 1-4, 2010. The hydraulic gradient was calculated for each Quarter, then averaged across the four Quarters.
CAP-18 Lifespan	2 years	Based upon the estimated CAP 18 ME™ lifetimes observed following the 2007 and 2009 injection events.
Dissolved Contaminant Demand		
PCE	0.180 mg/L	Averaged groundwater concentrations as measured during Quarters 1-4 , 2011. (Wells included: MMW-8S, MMW-P-08, MMW-P-07, MMW-P-12S, MMW-P12D)
TCE	0.0195 mg/L	
DCE	0.254 mg/L	
VC	0.152 mg/L	
Background Demand		
Oxygen	0.750 mg/L	Averaged low flow sampling parameters as measured during Quarters 1-4 , 2011. (Wells included: MMW-8S, MMW-P-08, MMW-P-07)
Nitrate	16.3 mg/L	Averaged low flow sampling parameters as measured during Quarters 1-4 , 2011. (Wells included: MMW-8S, MMW-P-08, MMW-P-07)
Manganese	2.0 mg/L	Default Value
Iron	3.32 mg/L	Averaged low flow sampling parameters as measured during Quarters 1-4 , 2011. (Wells included: MMW-8S, MMW-P-08, MMW-P-07)
Sulfate	105.7 mg/L	Averaged low flow sampling parameters as measured during Quarters 1-4 , 2011. (Wells included: MMW-8S, MMW-P-08, MMW-P-07)
Hardness	707.8 mg/L	

TABLE 1

CAP 18™ and CAP 18 ME™ Anaerobic Bioremediation Products Design Software

Input Parameters and Estimation Methodology

Michigan Plaza
3801-3823 West Michigan Street
Indianapolis, Indiana
MUNDELL Project No. M01046

INJECTION AREA C-1

Treatment Area Volume		ESTIMATION METHOD
Curtain Length	48 feet	Based upon remaining chlorinated solvent impacts as indicated by Quarterly monitoring activities.
Thickness of Treatment Zone	20 feet	Saturated interval thickness in Injection Area C-1
Well Spacing	12 feet	An injection spacing of 10 - 15 ft on centers is considered very effective for sandy saturated units, as encountered at the Site during previous soil investigations.
Treatment Area Characteristics		
Nominal Soil Type	SAND	Based upon field conditions observed during previous soil investigations.
Total Porosity	0.38	Default Values
Effective Porosity	0.29	
Hydraulic Conductivity	28.5 ft/d	
Hydraulic Gradient	0.003975 ft/ft	Calculated using the average hydraulic gradient from Quarters 1-4, 2010. The hydraulic gradient was calculated for each Quarter, then averaged across the four Quarters.
CAP-18 Lifespan	2 years	Based upon the estimated CAP 18 ME™ lifetimes observed following the 2007 and 2009 injection events.
Dissolved Contaminant Demand		
PCE	0.284 mg/L	Averaged MMW-1S groundwater concentrations from Quarters 1-4 ,2011.
TCE	0.039 mg/L	
DCE	0.013 mg/L	
VC	0.0199 mg/L	
Background Demand		
Oxygen	0.98 mg/L	Averaged low flow sampling parameters as measured during Quarters 1-4 ,2011. (Wells included: MMW-1S, MMW-8S, MMW-9S, MMW-10S, MMW-11S and MMW-12S)
Nitrate	2.66 mg/L	Averaged groundwater concentrations collected Quarter 1, 2011. (Wells included: MMW-9S and MMW-11S)
Manganese	2.0 mg/L	Default Value
Iron	3.5 mg/L	Averaged groundwater concentrations from Quarter 1-4, 2011. (Wells included: MMW-9S and MMW-10S, MMW-P-03S, MMW-P-08)
Sulfate	151 mg/L	Averaged groundwater concentrations from Quarters 1-4 ,2011. (Wells included: MMW-9S, MMW-10S, MMW-P-03S and MMW-P-08)
Hardness	688 mg/L	

TABLE 2

Proposed CAP 18 ME™ Injection Locations
Including Anticipated Injection Amounts

May 2012

Michigan Plaza
3801-3823 West Michigan Street
Indianapolis, Indiana
MUNDELL Project No. M01046

Injection Point Identification	Planned Injection Mass (lbs)	Planned Injection Volume (gallons)
INJECTION AREA A-1		
48	113.30	14.7
49	113.30	14.7
50	113.30	14.7
51	113.30	14.7
52	113.30	14.7
53	113.30	14.7
54	113.30	14.7
55	113.30	14.7
56	113.30	14.7
57	113.30	14.7
INJECTION AREA A-1: TOTAL INJECTION AMOUNTS	1,133	147.1
INJECTION AREA B-1		
21	360.90	46.9
22	360.90	46.9
23	360.90	46.9
24	360.90	46.9
25	360.90	46.9
26	360.90	46.9
27	360.90	46.9
28	360.90	46.9
29	360.90	46.9
30	360.90	46.9
31	360.90	46.9
32	360.90	46.9
33	360.90	46.9
34	360.90	46.9
35	360.90	46.9
36	360.90	46.9
37	360.90	46.9
38	360.90	46.9
39	108.27	14.1
40	108.27	14.1
41	108.27	14.1
INJECTION AREA B-1: TOTAL INJECTION AMOUNTS	6,821	886
INJECTION AREA B-2		
42	377.50	49.0
43	377.50	49.0
44	377.50	49.0
45	377.50	49.0
46	377.50	49.0
47	377.50	49.0
INJECTION AREA B-2: TOTAL INJECTION AMOUNTS	2,265	294

TABLE 2

Proposed CAP 18 ME™ Injection Locations Including Anticipated Injection Amounts

May 2012

Michigan Plaza
3801-3823 West Michigan Street
Indianapolis, Indiana
MUNDELL Project No. M01046

INJECTION AREA C-1		
Injection Point Identification	**Planned Injection Mass (lbs)**	**Planned Injection Volume (gallons)**
1	276.25	35.9
2	276.25	35.9
3	276.25	35.9
4	276.25	35.9
5	276.25	35.9
6	276.25	35.9
7	276.25	35.9
8	276.25	35.9
9	276.25	35.9
10	276.25	35.9
11	276.25	35.9
12	276.25	35.9
13	276.25	35.9
14	276.25	35.9
15	276.25	35.9
16	276.25	35.9
17	276.25	35.9
18	276.25	35.9
19	276.25	35.9
20	276.25	35.9
INJECTION AREA C-1: TOTAL INJECTION AMOUNTS	5,525	717.5
SITE-WIDE Injection Totals	**15,744**	**2,045**

FIGURES

MMW-13D
MMW-11S
MMW-11D
BLDG 10
1001-1011
BLDG 6
601-611
MMW-14D
MMW-12S
BLDG 2
201-211
BLDG 1
101-111
MMW-1S
SOURCE AREA C
MMW-10S
MMW-9S
MMW-8S
SOURCE AREA B
Michigan Street
MW168D
MW168S
MMW-P-12S
MMW-P-12D
MMW-P-07
MMW-P-08
MMW-P-10S
MMW-P-10D
MMW-P-01
MGW-5
Village
Pantry
(3801)
MMW-P-06
Kids-X-Clusive
3809)
Tire Shop
(3811)
Alcoholics
Anonymous
(3815)
Arca de Salvacion
(3819)
Michigan Plaza
Family Laundry
(3823)
GP-31
MMW-P-02
MMW-P-04
SOURCE AREA A
MMW-C-01
MMW-P-11S
MMW-P-11D
MMW-P-03S
MMW-P-03D
MMW-C-02
Little Eagle Creek
MW171S
MW171D
Olin Avenue
Road
MMW-P-09D
MMW-P-09S

INJECTION AREA C-1:
CAP-18 loading,
estimated demand =
5,525 pounds via
20 injection points.

INJECTION AREA B-2:
CAP-18 loading,
estimated demand =
2,265 pounds via
6 injection points.

INJECTION AREA B-1:
CAP-18 loading,
estimated demand =
6,821 pounds via
21 injection points.

INJECTION AREA A-1:
CAP-18 loading,
estimated demand =
1,133 pounds via
10 injection points.

NORTH

SCALE
0 80
feet

Keramida Monitoring Well Locations Referenced
from Keramida Environmental, Inc.
Project No. 2829
March 13, 2002

LEGEND

- GP-31 — 2011 Soil Boring
- MMW-P-12S — 2011 Monitoring Wells
- 1 — Proposed CAP-18 injection location (May 2012)
- MW160 — Keramida/Environ Monitoring Wells
- MMW-P-06 — MUNDELL Monitoring Wells, Michigan Plaza (September 2005)
- MMW-P-07 — MUNDELL Monitoring Wells (January 2007)
- MMW-P-09D — MUNDELL Monitoring Wells (May-June 2007)
- MMW-C-01 — MUNDELL Monitoring Wells (July/August 2008)
- MMW-11S — MUNDELL Monitoring Wells (November/December 2008)
- MGW-1 — MUNDELL Soil Gas Well

Mundell
Consulting Professionals
for the Earth and the Environment
110 South Downey Avenue
Indianapolis, Indiana 46219-6406
317-630-9060, fax 317-630-9065

Project Number: M01046
Drawing File: Inj_Pts_Rd3.skf
Date Prepared: 05/01/2012
Scale: 1"=80'

Proposed CAP 18 ME™ Injection Locations May 2012

Michigan Plaza
3801 - 3823 West Michigan Steet
Indianapolis, Indiana

FIGURE
1

Michigan Street

MMW-P-12S
MMW-P-12D

MMW-P-08
MMW-P-07
MMW-P-10S
MMW-P-10D
MMW-P-01
MGW-5

P-IA-1
P-CS-1
P-AA-1

Village Pantry (3801)
La Pulga (3807/3809)
Tire Shop (3811)
Alcoholics Anonymous (3815)
Arca de Salvacion (3819)
Michigan Plaza Family Laundry (3823)

MMW-P-06
MMW-P-05
MMW-P-02
MMW-P-04

Holt Road

MW170S
MW170D

MMW-P-13S
MMW-P-13D

MMW-P-11S
MMW-P-11D

MMW-C-01

MMW-P-03S
MMW-P-03D

Floral Park Cemetery

Cossell Road

LEGEND

MMW-P-12S	Monitoring Wells (2011)
P-AA-1	Proposed Vapor Intrusion Monitoring Points (May 2012)
MW160	Keramida/Environ Monitoring Wells
MMW-P-06	MUNDELL Monitoring Wells, Michigan Plaza (September 2005)
MMW-P-07	MUNDELL Monitoring Wells (January 2007)
MMW-P-09D	MUNDELL Monitoring Wells (May-June 2007)
MMW-C-01	MUNDELL Monitoring Wells (July/August 2008)
MMW-11S	MUNDELL Monitoring Wells (November/December 2008)
MGW-1	MUNDELL Soil Gas Well

NORTH

SCALE
0 100
feet

Keramida Monitoring Well Locations Referenced from Keramida Environmental, Inc.
Project No. 2829
March 13, 2002

Mundell
Consulting Professionals for the Earth and the Environment
110 South Downey Avenue
Indianapolis, Indiana 46219-6406
317-630-9060, fax 317-630-9065

Project Number: M01046
Drawing File: Prp_VI_Pts.skf
Date Prepared: 04/26/2012
Scale: 1"=80'

Proposed Vapor Intrusion Monitoring Locations
May 2012

Michigan Plaza
3801 - 3823 West Michigan Steet
Indianapolis, Indiana

FIGURE
2